In the Claims:

1. (Original) cooling device for expelling heat from a heat source located in the interior of an aircraft (38; 138; 238; 338) to a heat sink (32; 132; 232; 332), with a piping system (10; 110) sealed against the surrounding atmosphere, which is thermally coupled to a heat intake section (14; 114) with the heat source (38; 138; 238; 338) and to a heat output section (22) with the heat sink (32; 132; 232; 332), and which preferably has an essentially adiabatic conveyance section (21, 21a), whereby the piping system (10) is filled with a heat conveyance medium (12) which, when it takes in heat from the heat source (38; 138; 238; 338) in the heat intake section (14; 114) undergoes a transition from the liquid phase to the gaseous phase, then flows into the heat output section (22; 122) and here, when discharging heat to the heat sink (32; 132; 232; 332), condenses once again and flows back into the heat intake section (14; 114).

2. (Original) Cooling system in accordance with claim 1, whereby the piping system (10, 10a) includes a closed pipe, of which one end section is the heat intake section (14, 14a) and of which the other end section is the heat output section (22, 22a), whereby both end sections are connected to one another via the conveyance section (21, 21a).

3. (Amended) Cooling system in accordance with claim 1 ~~or 2~~, whereby the heat source (38; 138; 238; 338) includes at least one component of an electronic device in the aircraft, an on-board kitchen in the aircraft, a surface requiring cooling in the aircraft, or similar.

4. (Amended) Cooling system in accordance with ~~any of the claims 1 to 3~~ claim 1, whereby the heat sink (32; 132; 232; 332) includes a section of an external wall of the aircraft, an aircraft structure, an aircraft bilge, an air channel, in particular a ram air channel, or a heat exchanger.

5. (Amended) Cooling system in accordance with ~~any of the previous claims~~ claim 1, whereby the heat transfer in the heat intake section (14; 114) and/or in the heat output section (22; 122) takes place by means of a heat exchanger (34; 134; 234; 334) which couples the heat source (38; 138; 238; 338) and the heat sink (32; 132; 232; 332) with the piping system (10).

6. (Original) Cooling system in accordance with claim 5, whereby the heat flow transferred is controlled by the respective heat exchanger (34; 134; 234; 334).

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7. (Original) Cooling system in accordance with claim 6, whereby a ventilator (40; 140; 240; 340) is assigned to the respective heat exchanger (34; 134; 234; 334), by means of which the transfer of heat between the heat exchanger (34; 134; 234; 334) and the heat source (38; 138; 238; 338) is controlled.

8. (Amended) Cooling system in accordance with ~~any of the previous claims~~ claim 1, whereby the flow of heat conveyance medium (20) is controlled between the heat intake section (14; 114) and the heat output section (22, 122, 222, 322).

9. (Original) Cooling system in accordance with claim 8, whereby a regulator valve (158; 278; 280; 286; 378; 386) is assigned to the cooling system, by means of which the quantity of heat conveyance medium flowing to and/or from the heat exchanger (34; 134; 234; 334) is controlled.

10. (Amended) Cooling system in accordance with ~~any of the previous claims~~ claim 1, whereby a temperature sensor (150) is located in the section of the heat source (138; 238; 338), whereby the cooling system is controlled with reference to the temperature recorded by the temperature sensor (150).

11. (Amended) Cooling system in accordance with claim 10 ~~and any of the claims 6 to 9~~, whereby the ventilator (40; 140; 240; 340) and/or the regulator valve (158; 278; 280; 286; 378; 386) is controlled in accordance with the temperature recorded by the temperature sensor (150).

12. (Original) Cooling system in accordance with claim 11, whereby a regulation device (152) is provided, which controls the ventilator and/or the regulator valve in accordance with the temperature recorded by the temperature sensor (150).

13. (Amended) Cooling system in accordance with ~~any of the previous claims~~ claim 1, whereby a cold storage unit (266) is provided between the heating source (238) and the heat sink.

14. (Amended) Cooling system in accordance with ~~any of the claims 1 to 12~~ claim 1, whereby a cold storage unit (366) is provided in the section of the heat source (338).

15. (Amended) Cooling system in accordance with ~~any of the previous claims~~ claim 1, whereby the piping system (260, 262; 360, 362) forms a closed circuit which connects the heat source (238; 338) and the heat sink (264; 364) by means of a feed line and a discharge line respectively.

16. (Amended) Cooling system in accordance with claim 13 ~~or 14~~, whereby the cold storage unit (266; 366) is located in a special circuit with a special piping system (260; 362).

17. (Amended) Cooling system in accordance with ~~any of the previous claims~~ claim 13, whereby when the aircraft is in rest condition, the heat sink (264) is located geodetically higher than the cold storage unit (266) and the heat source (238).

18. (Original) Method for the discharge of heat from a heat source (38; 138; 238; 338) located in the interior of an aircraft to a heat sink (32; 132; 232; 332), whereby a piping system (10; 110) sealed against the surrounding atmosphere, which is thermally coupled to a heat intake section (14; 114) with the heat source (38; 138; 238; 338) and is thermally coupled to a heat output section (22) with the heat sink (32; 132; 232; 332), and which preferably has an essentially adiabatic transport section (21, 21a), is filled with a heat conveyance medium (12) which, when heat is taken from the heat source (38; 138; 238; 338) in the heat intake section (14; 114) undergoes a transition from the liquid phase to the gaseous phase, then flows into the heat output section (22) and here, when heat is discharged to the heat sink (32; 132; 232; 332) condenses again and flows back into the heat intake section (14; 114).